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THE CORRELATION CONSIDERING THE DEGREE OF AUTONOMOUS MOTIVATION, ACADEMIC ACHIEVEMENT AND MENTAL HEALTH[1]

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ABSTRACT

In the last twenty years, many studies have tested the Self-Determination Theory and the possibility to generalize the obtained results in case of academic population. The aim of this study was to determine the correlation considering the degree of autonomous motivation, academic achievement and mental health. The study was conducted on a sample of 350 second and third year students (169 male and 181 female). Self Regulation Questionnaire-Academic (SRQ-A, Ryan & Connell, 1989) and SF-36 Health Survey (Ware & Sherbourne, 1992) were included as instruments; average grades obtained in the previous academic year and a total number of exams that had not been passed were used for measuring academic achievements. The obtained results supported the Self-Determination Theory (Deci & Ryan, 1985, 1991). There is a positive correlation between academic self-regulation and average grades. Students who are more autonomously motivated had better average grades than students with controlled motivation. There is also a negative correlation between academic self-regulation and total number of exams not passed yet. Students who are more autonomously motivated had a smaller number of such exams than

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students with controlled motivations. We found a significant positive correlation related to the degree of relative autonomy, mental and general health. Students with autonomous motivation reported better mental and general health than students with controlled motivation.

Keywords: *academic achievement, self-determination continuum, self-regulation, mental health*

INTRODUCTION

Self-determination theory (SDT) is a general theory of human motivation which tries to explain how people, who have the freedom of choice and are not exposed to external influences, make choices. SDT primarily focuses on the degree to which someone's behavior is self-determined (Deci & Ryan, 2000). In SDT (Ryan & Deci, 1985) the authors distinguish types of motivation based on different reasons and goals which give impetus for action. The main difference refers to intrinsic motivation (to do something because it is interesting to us and because we enjoy doing it) and extrinsic motivation (to do something because it brings us to a certain outcome). SDT assumes that extrinsic motivation can vary greatly in its relative autonomy. At the far left side of the self-determination continuum (Figure 1) there is amotivation (the state of lacking the intention to act, i.e. absence of motivation). Going further to the right side along the continuum, different types of motivation organized according to the degree of autonomy can be found. Next to amotivation on the right side, there is the first type of extrinsic motivation, external regulation, which has the least degree of autonomy. Externally regulated behaviors are performed in order to meet an external demand or to obtain a reward. The next type of extrinsic motivation is introjected regulation, which implies a certain degree of self-determination that is still under great external control because the person feels some pressure, guilt or anxiety while performing an activity. The third type of extrinsic motivation is identified regulation with a greater degree of autonomy. It represents extrinsic motivation which is mainly internalized, so that the person recognizes the importance of a certain opinion or behavior regulated from the outside but he/she does not accept it as her/his own opinion or behavior. The type of extrinsic motivation showing the greatest degree of autonomy is integrated regulation. The person acts as if it was his/her own view or his/her own opinion. This type of extrinsic motivation is most similar to intrinsic motivation although it is

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different from it in that these activities are still performed because of instrumental values. The first two types of extrinsic motivation (external and introjected regulation) are also called controlled motivation (the control comes from the outside-externally, outside of the person), while the other two types (identified and integrated regulation) are called autonomous motivation (the person feels that everything is under 'control', i.e. he/she is the one who controls everything). At the far right of the continuum is intrinsic motivation which SDT defines as a prototype of autonomous behavior. However, it does not mean that, by increasing internalization, we can transform extrinsic into intrinsic motivation.

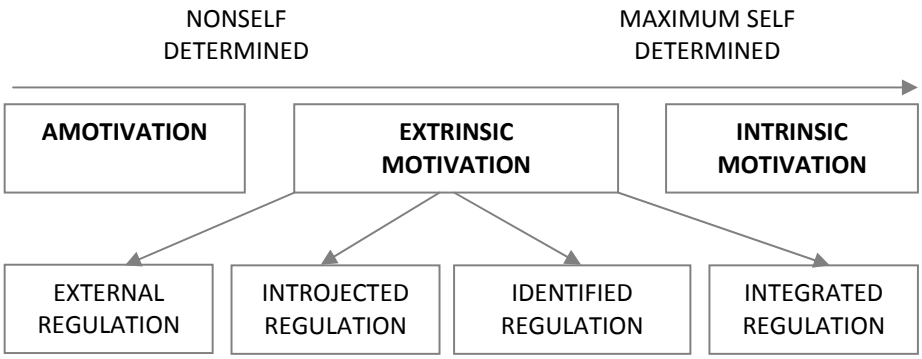

Figure 1. Self-determination continuum (Deci & Ryan, 1985)

Ryan and Connell (1989) were the first to test assumptions of the motivation continuum. They researched how primary school children with different types of extrinsic motivation did their homework. The pupils with external regulation showed less interest, hard work, effort for doing their homework, and they were more prone to blame others (teachers, parents, etc.) for negative outcomes. The pupils with introjected regulation invested some more effort, but they were also anxious and did not cope with failure well, while those pupils with identified regulation enjoyed school more and had more positive styles of coping with different outcomes. Intrinsic motivation was connected with interest, pleasure, feeling of competence, and positive coping style.

Additional studies have shown that a greater degree of autonomy in extrinsic motivation is related to better success in school and in college (Connell & Wellborn, 1990; Fortier, Vallerand & Guay 1995; Grolnick, Ryan & Deci, 1991; Guay & Vallerand, 1997; Miserandino, 1996; Ratelle, Guay, Vallerand, Larose & Senécal, 2007), greater persistence, more effort and pleasure in task performance (Ryan & Deci, 2000; Vansteenkiste, Simons,

Lens, Sheldon & Deci, 2004; Waterman, 2005), lower dropout rates (Ryan & Deci, 2000), learning of higher quality (Grolnick & Ryan, 1987; Ryan & Deci, 2000), better psychological (Levesque, Zuehlke, Stanek & Ryan, 2004; Maltby & Day, 2001; Ratelle, Vallerand, Chantal & Provencher, 2004; Sheldon & Kasser, 1995) and general health (Ryan, Plant & O'Malley, 1995). Studies have consistently shown that autonomous motivation is a good predictor of academic success, mental health (Black & Deci, 2000; Deci, Vansteenkiste & Lens, 2006), and important educational outcomes (Yi-Guang Lin & McKeachie, 1999).

The majority of studies into motivation, mental health, and academic achievement were conducted in the USA. In Croatia, there were several graduation theses at the Department of Psychology, Faculty of Humanities and Social Sciences in Zagreb (Ćuk, 1990; Košanski, 2004; Goldin, 2006; Sviben, 2006) and Faculty of Humanities and Social Sciences in Osijek (Velki, 2008), related to similar issues. The initial studies (Ćuk, 1990; Košanski, 2004), however, did not deal with SDT but with other possible determinants of academic success (e.g. personality, abilities, motivation orientation – but not the degree of autonomous motivation). Sviben (2006) was the first to translate and adapt the SRQ-A to the student population in Croatia. The research was done on psychology students, Faculty of Humanities and Social Sciences in Zagreb (N=191), all four study years. Among them, 84% (N=160) were female students, and 16% (N=31) were male students. The results showed that autonomous motivation had a significant contribution to academic achievement. No difference, in regards to the college year, was obtained in relative autonomy, i.e. the behavior of students during the four study years was mainly autonomously motivated. The perception of teacher's behavior style and autonomous regulation proved to be significant predictors of satisfaction with college studies. In his research, Goldin (2007) had adapted the SRQ for high school students. The research was done on 132 third year high school students from Zagreb (75 female and 57 male students). The results showed that intrinsic motivation was a relevant predictor of school success among girls while, besides intrinsic motivation, external and identified regulation were shown as significant predictors among boys. Velki (2008) did research on first and second year students of biology and medicine in Osijek (159 female and 58 male) who, at the time, belonged to the first generation of the Bologna process, i.e. their classes were held in sequential courses. She found a positive correlation between autonomous motivation and examination grades. Intrinsic motivation and the college that a student attended were shown as significant predictors of academic achievement. On the same sample, Velki (2009) also found a positive correlation between autonomous

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motivation and health. As can be seen from aforementioned studies, the sample mainly consisted of female participants, and earlier studies showed that girls achieved better school success, which in return could have had an effect on the results that were obtained in these studies. Furthermore, the research by Sviben (2006) was done on psychology students which in no way can be considered as a representative sample, even in the student population; some similar situation can be found in the research by Goldin (2007) which included a small sample of students that attended the general program school which is not representative of the overall high school student population. Measuring academic achievement, Velki (2008, 2009) used the grade in only one subject that the students did during the research (they had sequential courses), and the observed sample consisted of first and second year college students, not all generations. Besides, the results that were obtained in the USA cannot be generally applied to the Croatian population for several reasons. The system of education of college students and pupils in the USA and Croatia is very different, for instance, concerning the time when formal education starts, how many years of education are obligatory, in what class is the transition from primary to high school, etc. Moreover, the teaching methods that high school and college teachers use are not the same. Also, Croatia is among the leading countries in Europe and even in the world, regarding the number of courses that school pupils and college students have to take, i.e. the broad spectrum of knowledge that students have to acquire during their education. There is also a great difference in how obligatory and optional classes are organized. Even more, many of the described differences can be found in higher education. It is possible that the mentioned differences influence the degree of autonomous motivation and their correlation with academic achievement and mental health, which can only be determined by comparing the studies from different countries, i.e. cross-cultural research.

Because of the mentioned shortcomings of previous studies, possible cultural influence on education, and differences in the school systems between the USA and Croatia, we thought that it was necessary to do additional research on the Croatian student population in order to confirm the assumptions of SDT.

The aim of this research was to examine the correlation among the degree of autonomous motivation, academic achievement, and mental health.

Hypothesis (1): There is a positive correlation between the degree of autonomous motivation and academic achievement. Students with a greater degree of autonomous motivation have a better academic achievement.

Hypothesis (2): There is a positive correlation between the degree of autonomous motivation and mental health. Students with a greater degree of autonomous motivation have better mental health.

METHOD

Participants

The research involved 350 participants, second and third year undergraduates from the Faculty of Teacher Education and the Faculty of Electrical Engineering in Osijek. The characteristics of the participants are shown in Table 1.

Table 1. Characteristics of participants

		The Faculty of Teacher Education	The Faculty of Electrical Engineering	Total
Sex	male	5	164	169
	female	156	25	181
College year	2nd year	82	86	168
	3rd year	99	83	182

Instruments

For the purpose of collecting general data in this research, a special form was constructed. It covered age, gender, faculty attended by each participant, college year being currently enrolled, academic achievement in the previous college year, number of exams that were not passed in the previous year and in the previous semester.

Self-Regulation Questionnaire-Academic (SRQ-A; Ryan & Connell, 1989)

This instrument examines different ways of regulating motivation in the school domain. The questionnaire we used in this research was adapted for college students. It is divided into 4 parts; each part begins with the question about student's reason(s) for a certain behavior. Each question

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contains 8 statements, so that the entire questionnaire comprises 32 items. The evaluation of each statement is based on the Likert type scale (1 – complete disagreement, 4 – neither agreement nor disagreement, 7 – complete agreement). External and introjected regulations are represented with 9 items, while identified regulation and intrinsic motivation are represented with 7 items. Every subscale can be used separately. The questionnaire allows the combination of subscales, making the index of relative autonomy; RAI = 2x intrinsic motivation + identified regulation – introjected regulation – 2x external regulation. It is clear from the formula that the subscales representing the autonomous form of regulation are ponderated positively, while the subscales representing the controlled form of regulation are ponderated negatively. RAI points to the degree to which a behavior is autonomously regulated i.e. self-determined. It was also confirmed that the types of regulation, assumed to be closer on the SD continuum, were in a greater correlation than the ones further apart, which again showed that RAI adequately measures the dimension of self-determination. Such results confirm that it is justifiable to combine individual subscale averages in an index of relative autonomy so that certain ponderosity is given to each regulation style, in accordance with its position in the motivation continuum. It is possible to form results especially for controlled motivation (external regulation + introjected regulation) and especially for autonomous motivation (identified regulation + intrinsic motivation). In our research, the whole questionnaire reliability (Cronbach's alpha) was $\alpha = 0.92$. The reliabilities of particular subscales were as follows: external regulation $\alpha = 0.80$, introjected regulation $\alpha = 0.82$, identified regulation $\alpha = 0.80$, and intrinsic motivation $\alpha = 0.84$. In her research, Sviben (2006) obtained the reliability of subscales ranging from $\alpha = 0.81$ to $\alpha = 0.84$. The translation and adaptation in Croatian was done by Sviben (2006) as a part of her graduation thesis.

Short Form Health Survey (SF-36 Health Survey; Ware & Sherbourne, 1992)

This frequently used questionnaire is to be seen as theoretically founded and empirically verified operationalization of two health concepts, namely physical health and mental health; it additionally covers two of its general manifestations - functioning and well-being.

It contains 36 items grouped in 8 different health scales: physical functioning, role limitations because of physical health problems, bodily pain, social functioning, mental health, role limitations because of emotional

problems, vitality and general health perceptions. The questionnaire was constructed to enable a precise comparison of groups in eight conceptual fields mentioned above. Generating and comparing the profiles based on the obtained results make it easier to understand population differences in terms of physical and mental health.

This research is focused on participants' mental and general health. The scale of general mental health is obtained by combining three SF-36 health survey scales as follows: social functioning (SF,) role limitations because of emotional problems (RE) and mental health (MH). The number of points on each scale is transformed into the common scale with 0 as the minimum score (the person reports on complete illness) and with 100 as the maximum score (the person reports on complete health). The concept of general mental health is expressed as an average on the three scales, and its internal reliability (Cronbach's alpha) is α=0.88. The general health scale consists of five items and their combination gives result for the mentioned scale. The number of points, as in the previous case, is transformed into the common scale with the minimum score (0), and the maximum score (100). The reliability of general health scale is α=0.71. In our research, the whole survey reliability (Cronbach's alpha) is α=0.77, while the reliability for mental health subscale is α=0.75, and it is a = 0.72 for general health subscale. The translation and standards for the Croatian population were prepared by Maslić Seršić and Vuletić (2006); this version was used in our study.

Procedure

All participants were informed of the general research aims and purpose; they were provided with an opportunity to voluntarily participate in the research. It was also guaranteed to them that the research data would be used only for scientific purposes.

The data was collected during the spring semester, in groups, each time for 45 minutes. Upon the administration of instructions and questionnaires, the psychologist read the instructions aloud and directed the participants to read them silently again before filling the questionnaires. When the participants finished the questionnaire-filling, they could ask questions and they also received an e-mail contact in case they had any additional questions.

RESULTS AND DISCUSSION

In the data analysis, the descriptive statistics for variables included in the research (Table 2) was calculated first. The inter-correlations of the examined variables (Table 3) were calculated then. The requirements for performing correlational analyses were met for motivational variables (RAI, external, introjected and identified regulation, also intrinsic motivation; Kolmogorov-Smirnov test was not statistically significant), whereas the requirement for normal distribution in case of the other variables was not met (Kolmogorov-Smirnov test was statistically significant). As this is a large sample (N ≥ 200; according to Field, 2009), there is, however, a possibility that smaller variations from the norm point to a disturbed condition of distribution normality, i.e. that the results are not normally distributed. For that reason, we checked the coefficient of skewness and that of kurtosis, which indicated that the normality of distribution was not significantly disturbed in case of any variable, i.e. the results regarding skewness ranged from -/+ 0.395 to -/+ 0.958, and the results considering kurtosis ranged from -/+ 0.384 to -/+ 0.984. According to Field (2009) and Sirkin (2006), skewness and kurtosis are considered to be very good if their value ranges from +1 to -1; and for applying most of the univariate parametric statistics, the value between +2 and -2 is accepted, so we decided to apply Pearson's correlation coefficient in the further analysis.

Table 2. The main descriptive statistics for all examined variables (N=350)

Examined variables	M	min	max	sd
Age	20.91	19	25	0.89
Academic achievement in the previous college year	3.53	1	5	0.82
The number of exams not passed in the previous year	1.09	0	10	1.36
The number of exams not passed in the previous semester	1.37	0	6	1.32
The total number of non-passed exams	2.46	0	14	2.39
Mental health	69.57	8	100	22.49
General health	71.62	10	100	17.85
RAI (relative autonomy index)	0.87	-8.38	13.62	3.24
External regulation	4.15	1	6.56	1.11
Introjected regulation	4.00	1	6.56	1.07
Identified regulation	5.18	1.57	7.00	0.94
Intrinsic motivation	3.99	1	6.71	1.15

Analyzing the correlation matrix in Table 3, we expectedly confirmed the correlation between academic achievement and different types of motivation, so our first hypothesis was confirmed. To measure academic achievement we used two indicators, such as general achievement of the participant in the previous college year and the total number of exams that were not passed (we got this by combining the number of exams not passed in the previous college year and the number of exams not passed in the previous semester). To measure motivation we used four types of motivation that are spread along the self-determination continuum (external, introjected and identified regulation, plus intrinsic motivation), and the relative autonomy index (RAI) which is a more precise motivation measure (unlike the subscales of motivation) because it relates to the degree of autonomous self-determination (which spreads across the entire continuum of self-determination). We obtained a statistically significant positive correlation between autonomous types of regulation (identified regulation and intrinsic motivation), RAI and general achievement, which is in favor of the fact that students with a greater degree of autonomous motivation make a better general achievement. No statistically significant correlation between the controlled types of motivation (external and introjected regulation) and general achievement was obtained. As for the other indicator of academic achievement, we obtained a statistically significant negative correlation related to autonomous types of motivation, RAI and total number of unpassed exams; we did not find a statistically significant correlation between the controlled types of motivation and the total number of exams that had not been passed. These results support the fact that students with a greater degree of autonomous motivation have a smaller number of exams they have not passed. The obtained results fit into the previous research into the context of SDT, showing that autonomous motivation, in contrast to controlled motivation, is related to positive learning outcomes (Reeve, Deci, and Ryan, 2004), better learning strategies, greater persistence, and better task performance (Connell & Wellborn, 1990; Fortier et al., 1995; Grolnick et al., 1991; Guay & Vallerand, 1997; Deci & Ryan, 1985, 2000). Students with predominantly control motivation have bad achievements, study less efficiently, especially if a certain degree of creativity is demanded of them (Amabile, 1996; Grolnick & Ryan, 1987; Utman, 1997). The advantage of autonomous motivation over controlled motivation, besides the achievement, is also noticed in greater persistence and efficacy (Vansteenkiste et al., 2004) which, in turn, results in better general achievement. Our population studies (Sviben, 2006; Velki, 2008) produced similar results. As obtained correlations are relatively small (in case of the controlled types of motivation no statistically significant correlation with any of the academic achievement

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measures was obtained), the results of this research can point to the fact that the students may have not recognized the importance of grades (general achievement calculations based on them), so they are not true indicators of students' knowledge. One of the reasons for this could be found in the fact that the students are not graded consistently, i.e. grading criteria are not always the same. Every teacher has his/her own criteria; besides, it is possible that the difference in grading criteria is even more emphasized between the students of different faculties. Teacher's subjective evaluation can also affect grading. In addition, the students could be receiving different messages from their parents or friends that are related to the importance of grades, which would influence their approach to the course. Furthermore, students can decide to drop out of college in order to avoid bad academic achievement.

The second indicator of academic achievement (total number of exams that had not been passed) was more correlated with the autonomous types of motivation and RAI; no correlation with the controlled types of motivation was obtained. So far, there has been no research including the number of exams that were not passed as a measure of academic achievement. It is important to emphasize that this achievement measure can also be used as a good test of real academic achievement. Since students employ different tactics in order to graduate from college, one of them being to pass easier exams where they get better grades and, thus, collect a certain number of points, which gives them the right to enroll the next study year, it often happens that we have more students with an equal general achievement but a great difference in the number of exams that have not been passed yet. This is the reason why it should be taken into consideration that more successful students have very good and excellent general achievements, as well as there are less exams they have not passed yet. Based on the current data, it can clearly be seen that students with the least number of such exams are also the most autonomously motivated. However, even these correlations are relatively small. The reason for this may lie in the fact that students can transfer only a certain number of exams they have not passed into the next year or the next semester. Therefore, the students with a larger number of such exams were not able to enroll the next study year, so they were not included in this research. These are also the students who more frequently drop out of college or change faculties, which leads us to the fact that there is a decreased number of students with controlled motivation (the ones belonging to this group) which may have resulted in our failure to obtain a correlation between the controlled types of motivation and the total number of non-passed exams. Vallerand & Bissonnette (1992) did research on the Canadian students, following their academic achievement for one year. Their results showed that the students who had dropped out during the year

had statistically significant lower results on the index or relative autonomy (i.e. controlled motivation was predominant), as opposed to the students who continued their education (i.e. those who predominantly had autonomous motivation).

Using RAI, we could also see how many students were autonomously motivated. In our research, the majority was autonomously motivated (59.71%), while the students with controlled motivation (40.29%), besides being the minority, had a narrower range of results, which could have had an effect on our failure to obtain the correlation between the controlled types of motivation and both indicators of academic achievement. Our results point to the fact that motivation in students is relatively self-determined and that the autonomous type of motivation regulation is prevalent, which supports the previous research (Guay & Vallerand, 1997; Levesque et al., 2004; Reeve et al., 2004; Sviben, 2006; Velki, 2008; Yi-Guang & McKeachie, 1999). Moreover, the obtained results advocate the SDT thesis about intrinsic motivation and integrated extrinsic motivation being related to academic achievement (Ryan & Deci, 2000).

The second hypothesis referred to the correlation between mental health and different types of motivation (Table 3). We obtained a statistically significant positive correlation between RAI and mental health, and a statistically significant negative correlation between controlled motivation (external and introjected regulation) and mental health. The results are in favor of the fact that the students with a greater degree of autonomous motivation also report on better mental health, whereas the students with controlled motivation report on worse mental health. In accordance with the previous studies (Levesque et al., 2004; Maltby & Day, 2001; Ratelle et al., 2004; Sheldon & Kasser, 1995; Velki, 2009), the obtained data provided us with an additional empirical support for a positive correlation between the degree of autonomy and mental health. Since general health is something that can indirectly affect academic achievement and, consequently, motivation (i.e. certain contents are not inaccessible due to illness or disability, inability to perform college practice, etc.), we checked the correlation between general health and different types of motivation. We found a statistically significant positive correlation between RAI and general health, also between identified regulation and general health. A statistically significant negative correlation was found between external regulation and general health. These correlations were expectedly lower than the ones between mental health and RAI. Ryan & Connell (1989) discovered that introjected regulation (controlled motivation) is positively correlated with school anxiety and negative ways of coping with failure. Identified regulation (autonomous motivation), on the other hand, was positively correlated with

school pleasures and positive ways of coping with failure. The current results point to the fact that the students with relatively controlled motivation can appear as motivated as the students with autonomous motivation. However, there are differences in academic achievement and, even more, in mental health. The advantage of autonomous motivation over the controlled motivation was also found in other studies, showing that autonomous motivation has an effect on the improvement of mental health (Black & Deci, 2000; Levesque et al., 2004). Numerous studies on students have shown that extrinsic motivation is also related to worse mental health and more internal symptoms (Kasser & Ahuvia, 2002; Ryan, Deci & Grolnick, 1995; Srivastava, Locke & Bartol, 2001; Vansteenkiste, Duriez, Simons & Soenens, 2006). Apart from this, studies have shown that autonomous motivation improves mental health, and mental health contributes to better general health (Miquelon & Vallerand, 2008). Generally, persons who are autonomously motivated can function in a way well integrated with the way in which they see themselves; this, in turn, positively influences their mental health and, consequently, their general health. The students who are constantly under an external pressure (e.g. material rewards, punishments, deadlines, etc.) or an internal pressure (e.g. feeling of guilt, public humiliation, denial of love, etc.) will have a high degree of controlled motivation, which, in turn, causes worse mental health (e.g. anxiety, depression, etc.) and also leads to poor general health. Although the obtained results were expected, there are several possible reasons why the correlations are relatively low. First, the participants in our research were students (sample homogenous by age, level of education, etc.) and the obtained results cannot be applied to other age and cultural groups. Apart from that, the majority of students reported on good mental and general health, also expectedly because these young people also had a medical examination before enrolling the college. Third, the results for mental and general health were based on participants' self-evaluation, which is a very subjective measure. In future studies, it would be good to establish some more objective health measures.

Generally, we can say that this research has shown and confirmed the results of the previous studies supporting the fact that a greater degree of relative autonomy is related to a better academic achievement as well as to better mental and physical health. There are several important limitations in the described research that are worth mentioning. The first limitation considers the sample of participants. The ages ranged from 19 to 25, which is a relatively small range, but we believed that it represented the student population well. Besides, the participants were only second and third year students. It would have been more preferable if we had included students of all generations, but it was almost impossible from the practical viewpoint. The

first problem that appeared relates to the general academic achievement in the previous year, so that the first year students could not provide the requested data. For the first year students, and the variable regarding non-passed exams (their number), it was also impossible to collect valid data. The fourth year students (i.e. first year of graduate study according to the Bologna process) were not taken into consideration here for several reasons. According to the Bologna process, these must enroll the study program again (according to the new program, they finish their undergraduate studies and, in order to graduate, they need to take two additional years), which implies that they have passed all exams from the previous three years, defended their final work and passed the entrance examination, so we have the same problem with this group of students as with the first year students. Besides, many students take an additional year to pass the remaining exams after they have finished the third year and it is very hard to reach them; they could be a crucial group because they belong to the same generation as the students who have registered for the fourth year, i.e. the first year of graduate studies. As for the fifth year students (i.e. second year of graduate studies), such a generation does not exist (the oldest generation of Bologna students are actually the fourth year students) because the Bologna process has been recently introduced into the Croatian educational system. The second limitation refers to the measure of academic achievement. Although we had two indicators of academic achievement, a problem appeared because they could not be applied to certain generations (first year undergraduate study and first year graduate study). Therefore, future research should include every generation of students who attend some faculty and additional measures of academic achievement that will be applied to all generations (e.g. mid-term exam grades, number of attempts to pass a certain exam, class attendance, etc.). The third limitation regards the measures of mental and general health. Although we used a reliable and a common instrument, we had a problem because all the answers were based on students' self-evaluation. It is well known that certain mental disorders (e.g. narcissistic personality disorder or other personality disorders) must not be a problem to the person but presents a great problem for his/her environment and, therefore, the person will not mention any problem in the self-evaluation report. If a person, since birth or childhood, has had certain physical health difficulties to which it is well adjusted (i.e. diabetes, invalidity, hemiparesis, etc.) her/his health condition will not be realistically shown on the scale of general health. Future studies should use additional measures of health conditions (i.e. psychiatric evaluation, interview, family or/and peer evaluation, medical exam, etc.). Therefore, future studies into the generalization of the obtained results should take into consideration the aforementioned limitations.

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Table 3. Correlation matrix for examined variables

Examined variables	1	2	3	4	5	6	7	8	9	10
1. Academic achievement in the previous college year										
2. The number of non-passed exams from the previous year	**-.550****									
3. The number of non-passed exams from the previous semester	**-.484****	**.594****								
4. The total number of non-passed exams	**-.580****	**.896****	**.889****							
5. Mental health	-.005	-.098	.036	-.036						
6. General health	-.051	.034	**.112***	.081	**.447****					
7. RAI (relative autonomy index)	***.106****	***-.114****	***-.167*****	***-.157*****	***.236*****	***.184*****				
8. External regulation	.015	-.020	-.023	-.024	**-.200****	**-.122***	**-.589****			
9. Introjected regulation	.074	-.087	-.051	-.078	**-.144****	-.07	**-.330****	**.742****		
10. Identified regulation	**.158****	**-.227****	**-.264****	**-.275****	.076	**.131***	**.432****	**.336****	**.466****	
11. Intrinsic motivation	**.134***	**-.127***	**-.173****	**-.168****	.042	.055	**.510****	**.347****	**.529****	**.743****

* p < 0.05 ** p < 0.01

CONCLUSION

Our research confirmed the results obtained from the previous Croatian studies. As expected, we found a positive correlation between the degree of autonomous motivation and academic achievement, as well as that between the degree of autonomous motivation and mental health. The biggest problem, still unsolved, refers to the generalization of current results in case of the overall student population and even further. Future research is, thus, needed to test the theses of SDT and their general validity not only in the context of students but also other population.

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POVEZANOST STUPNJA AUTONOMIJE MOTIVACIJE, AKADEMSKOG USPJEHA I PSIHIČKOG ZDRAVLJA[2]

SAŽETAK

Unazad dvadesetak godina brojni istraživači su se bavili provjerom teorije samoodređenja i mogućnosti njezine generalizacije na akademsku populaciju. Cilj našeg istraživanja bio je utvrditi povezanost stupnja autonomije motivacije, akademskog uspjeha i psihičkog zdravlja. Istraživanje je provedeno na uzorku od 350 studenata druge i treće godine (169 muških i 181 ženskih sudionika). Korišteni su sljedeći mjerni instrumenti: Upitnik akademske samoregulacije (Self Regulation Questionnaire-Academic, SRQ-A, Ryan i Connell, 1989), Upitnik za samoprocjenu zdravstvenog statusa (SF-36 Health Survey, Ware i Sherbourne, 1992) te dvije mjere akademskog uspjeha (opći uspjeh s prethodne godine studija i ukupan broj nepoloženih ispita). Dobiveni rezultati govore u prilog teoriji samoodređenja (Deci i Ryan, 1985, 1991). Dobili smo pozitivnu povezanost između akademske samoregulacije i općeg uspjeha studenata. Studenti s većim stupnjem autonomne motivacije imali su bolji uspjeh od studenata s kontroliranom motivacijom. Također smo dobili negativnu povezanost između akademske samoregulacije i broja nepoloženih ispita. Studenti s većim stupnjem autonomne motivacije imali su manji broj nepoloženih ispita za razliku od studenata s kontroliranom motivacijom. Dobivena je i pozitivna povezanost između stupnja relativne autonomije i psihičkog i općeg zdravlja. Studenti koji su autonomno motivirani izvještavali su o boljem psihičkom i općem zdravlju, za razliku od studenata s kontroliranom motivacijom.

Ključne riječi: *akademski uspjeh, kontinuum samoodređenja, psihičko zdravlje, samoregulacija*

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UVOD

Teorija samoodređenja (TS, eng. Self-determination theory - SDT) je opća teorija ljudske motivacije koja pokušava objasniti kako ljudi koji imaju slobodu izbora i nisu pod vanjskim utjecajima donose odluke. TS je fokusirana na stupanj u kojem je nečije ponašanje samoodređeno (Deci i Ryan, 2000). U teoriji samoodređenja (Ryan i Deci, 1985) autori razlikuju tipove motivacije koji se temelje na različitim razlozima i ciljevima koji daju poticaj na akciju. Osnovna je razlika između intrinzične motivacije (raditi nešto zbog toga što nam je to zanimljivo ili zato što uživamo u tome) i ekstrinzične motivacije (raditi nešto zbog toga što nas to vodi zasebnom ishodu). TS pretpostavlja da ekstrinzična motivacija može jako varirati u stupnju autonomije. Na lijevom kraju kontinuuma samoodređenja (Slika 1) nalazi se amotivacija (stanje nedostatka namjere za aktivnošću, odsustnost, tj. nepostojanje motivacije). U nastavku kontinuuma nalaze se različiti tipovi motivacije organizirani ovisno o stupnju autonomije. Pored amotivacije s desne strane nalazi se prvi tip ekstrinzične motivacije, vanjska ili eksternalna regulacija (eng. external regulation), koji ima najmanji stupanj autonomije. Ovakva ponašanja se izvode kako bi se udovoljilo vanjskom postavljenom zadatku ili došlo do nagrade. Sljedeći tip ekstrinzične motivacije je usvojena ili introjecirana regulacija (eng. introjected regulation) koja odražava određeni stupanj samoodređenja koji je još uvijek pod velikom vanjskom kontrolom jer osoba osjeća određeni pritisak, krivnju ili anksioznost pri izvođenju aktivnosti. Treći tip ekstrinzične motivacije je identificirana ili poistovjećena regulacija (eng. identified regulation) koja ima veći stupanj autonomije. Predstavlja ekstrinzičnu motivaciju koja je uglavnom internalizirana, a osoba prepoznaje važnost nekog mišljenja ili ponašanja koje je propisano izvana, ali ga ne prihvaća kao vlastito mišljenje i ponašanje. Tip ekstrinzične motivacije koji ima najveći stupanj autonomnosti je integrirana regulacija (eng. integrated regulation). Javlja se kod osoba koje su određenu vrijednost integrirale, tj. asimilirale sa ostalim aspektima vlastitog ja. Osoba se ponaša kao da je to njezin stav, njezino vlastito mišljenje. Ovaj tip ekstrinzične motivacije najsličniji je intrinzičnoj motivaciji iako se razlikuje po tome što se takve aktivnosti vrše i dalje zbog instrumentalnih vrijednosti. Prva dva tipa ekstrinzične motivacije (vanjska i usvojena regulacija) se nazivaju i *kontrolirana motivacija* (kontrola dolazi izvana, izvan osobe; eng. controlled motivation), a druga dva tipa (poistovjećena i integrirana regulacija) nazivaju se *autonomna motivacija* (osoba osjeća da su stvari pod «kontrolom», odnosno da ona upravlja; eng. autonomous motivation). Na krajnjoj desnoj strani kontinuuma nalazi se intrinzična motivacija koju teorija samoodređenja definira kao prototip

autonomnog ponašanja. Međutim to ne znači da povećanjem internalizacije možemo ekstrinzičnu motivaciju transformirati u intrinzičnu.

Slika 1.

Ryan i Connell (1989) prvi su testirali postavke motivacijskog kontinuuma. Istraživali su kako su djeca osnovnoškolske dobi s različitim tipovima ekstrinzične motivacije pisala domaću zadaću. Učenici s vanjskom regulacijom pokazuju manje interesa, napora i truda za zadaću i skloniji su kriviti druge (učitelje, roditelje…) za negativne ishode. Učenici s usvojenom regulacijom ulagali su nešto više truda, ali su također bili anksiozni i slabije se nosili s neuspjehom, dok su oni s poistovjećenom regulacijom više uživali u školi i imali pozitivnije stilove suočavanja s različitim ishodima. Intrinzična motivacija bila je povezana s interesom, užitkom, osjećajem kompetencije i pozitivnim suočavanjem.

Dodatna su istraživanja pokazala da je veći stupanj autonomnosti kod ekstrinzične motivacije povezan s boljim uspjehom u školi i na studiju (Connell i Wellborn, 1990; Fortier, Vallerand i Guay, 1995; Grolnick, Ryan i Deci, 1991; Guay i Vallerand, 1997; Miserandino, 1996; Ratelle, Guay, Vallerand, Larose i Senécal, 2007), većom upornošću, trudu i užitku pri izvođenju zadataka (Ryan i Deci, 2000; Vansteenkiste, Simons, Lens, Sheldon i Deci, 2004; Waterman, 2005), manje odustajanja od školskih zadataka (Ryan i Deci, 2000), većom kvalitetom učenja (Grolnick i Ryan, 1987; Ryan i Deci, 2000), boljim psihičkim zdravljem (Levesque, Zuehlke, Stanek i Ryan, 2004; Maltby i Day, 2001; Ratelle, Vallerand, Chantal i Provencher, 2004; Sheldon i Kasser, 1995) te boljim općim zdravljem (Ryan, Plant i O'Malley, 1995). Istraživanja su konzistentno pokazala kako je autonomna motivacija dobar prediktor akademskog uspjeha i psihičkog zdravlja (Black i Deci, 2000; Deci, Vansteenkiste i Lens, 2006) te važnih obrazovnih ishoda (Yi-Guang Lin i McKeachie, 1999).

Većina su navedenih istraživanja koja su se bavila motivacijom, psihičkim zdravljem i akademskim uspjehom, provedena u SAD-u. U Hrvatskoj se nekoliko diplomskih radova Odsjeka za psihologiju na Filozofskom fakultetu u Zagrebu (Ćuk, 1990; Košanski, 2004; Goldin, 2006; Sviben, 2006) i Filozofskom fakultetu u Osijeku (Velki, 2008) bavilo sličnom problematikom. Međutim, prvotna istraživanja (Ćuk, 1990; Košanski, 2004) nisu se bavila teorijom samoodređenja, nego nekim drugim mogućim odrednicama akademskog uspjeha (npr. ličnost, sposobnosti, motivacijska orijentacija – ali ne i stupanj autonomije motivacije). Sviben (2006) je u svom istraživanju prva prevela i prilagodila Upitnik akademske samoregulacije za hrvatsku populaciju studenata. Istraživanje je provedeno na studentima

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psihologije Filozofskog fakulteta u Zagrebu (N=191) i to na sve četiri godine studija. Od toga su 84 % (N=160) bile studentice, a 16% (N=31) studenti. Rezultati su pokazali kako značajni doprinos u akademskom uspjehu ima autonomna motivacija. Nije dobivena razlika s obzirom na godinu studija u relativnoj autonomiji, odnosno ponašanje studenata na sve četiri godine je uglavnom autonomno motivirano. Percepcija nastavničkog stila ponašanja i autonomna regulacija pokazali su se značajnim prediktorima zadovoljstva studijem. Goldin (2007) je u svom istraživanju prilagodio Upitnik akademske samoregulacije za srednjoškolski uzrast. Istraživanje je provedeno na uzorku od 132 učenika trećih razreda zagrebačkih gimnazija (75 ženskih i 57 muških ispitanika). Rezultati su pokazali kako je intrinzična motivacija značajan prediktor školskog uspjeha u djevojčica dok se kod dječaka, osim intrinzične, značajnim prediktorom pokazala i vanjska i poistovjećena regulacija. Velki (2008) je provela istraživanje na studentima prve i druge godine (159 ženskih i 58 muških sudionika) biologije i medicine u Osijeku koji su tada bili prve generacije bolonjskog studija, tj. njihova nastava se održavala u turnusima. Utvrdila je postojanje pozitivne povezanosti autonomne motivacije s ocjenama na ispitu. Značajnim prediktorima akademskog uspjeha pokazali su se intrinzična motivacija i fakultet koji student pohađa. Na istom uzorku Velki (2009) je utvrdila pozitivnu povezanosti autonomne motivacije sa zdravljem. Kao što se iz navedenih istraživanja može vidjeti, uzorak je bio pretežno ženskog spola, a prijašnja istraživanja su pokazala kako djevojke postižu bolji akademski i školski uspjeh, što je naravno moglo utjecati i na dobivene rezultate u navedenim istraživanjima. Nadalje istraživanje Sviben (2006) je provedeno na studentima psihologije što nikako ne predstavlja reprezentativni uzorak čak niti studentske populacije, a slično je i kod istraživanja Goldina (2007) koje je provedeno na malom uzorku gimnazijalaca što nikako ne predstavlja srednjoškolsku populaciju. Velki (2008, 2009) je za mjeru akademskog uspjeha koristila ocjenu samo iz jednog ispita kojeg su studenti (jer su imali nastavu u turnusima) za vrijeme provođenja istraživanja slušali, a uzorak su bili studenti prve i druge godine studija, a ne sve generacije. Osim toga rezultati istraživanja provedenih u SAD-u ne mogu se generalizirati na hrvatsku populaciju iz više razloga. Sustav obrazovanja studenata i učenika u SAD-u i Hrvatskoj uvelike se razlikuje, npr. kada se započinje formalno školovanje, koliko godina školovanja je obavezno, u kojem razredu završava osnovna škola i prelazi se u srednju školu i sl. Nadalje i metode poučavanja nastavnika i profesora nisu iste. Osim toga Hrvatska je među vodećim zemljama u Europi, pa i u svijetu, po broju predmeta kojeg učenici i studenti trebaju polagati, odnosno po širini područja znanja kojeg učenici moraju savladati tijekom školovanja. Također i sama organizacija nastave i izbornih nastavnih aktivnosti uvelike se

razlikuje. Štoviše, brojne opisane razlike postoje i u visokoškolskom obrazovanju. Moguće je da navedene razlike utječu na stupanj autonomije motivacije i njegovu povezanost s akademskim uspjehom i psihičkim zdravljem, što je moguće utvrditi jedino usporedbom istraživanja u različitim zemljama, odnosno međukulturalnim istraživanjima.

Zbog navedenih nedostataka prijašnjih istraživanja te mogućeg kulturološkog utjecaja na obrazovanje i razlika u školskom sustavu između SAD-a i Hrvatske smatrali smo da je potrebno provesti dodatna istraživanje na hrvatskoj populaciji studenata kako bismo potvrdili postavke teorije samoodređenja i na populaciji hrvatskih studenata.

Cilj ovog istraživanja je ispitati povezanost između stupnja autonomije motivacije, akademskog uspjeha i psihičkog zdravlja.

Hipoteza (1): Postoji pozitivna povezanost između stupnja autonomije motivacije i akademskog uspjeha. Studenti s većim stupnjem autonomije motivacije imaju bolji akademski uspjeh.

Hipoteza (2): Postoji pozitivna povezanost između stupnja autonomije motivacije i psihičkog zdravlja. Studenti s većim stupnjem autonomije motivacije imaju bolje psihičko zdravlje.

METODA

Sudionici

U istraživanju je sudjelovalo ukupno 350 sudionika, studenata 2. i 3. godine preddiplomskog studija Učiteljskog fakulteta u Osijeku i Elektrotehničkog fakulteta u Osijeku. Karakteristike sudionika prikazane su u Tablici 1.

Tablica 1.

Instrumenti

U svrhu ovog istraživanja napravljen je posebni obrazac kojim su prikupljeni opći podatci: dob, spol, fakultet koji sudionik pohađa i godina studija na kojoj se trenutno nalazi, uspjeh s kojim je završio prethodnu godinu studija, broj nepoloženih ispita iz prethodnog semestra te iz prethodne godine.

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Upitnik akademske samoregulacije (Self Regulation Questionnaire-Academic, SRQ-A; Ryan i Connell, 1989)

Ovaj instrument ispituje različite tipove regulacije motivacije u školskoj domeni. Upitnik kojim smo se koristili u ovom istraživanju prilagođen je za studente. Podijeljen je na 4 dijela, a na početku svakog dijela postavljeno je pitanje o tome zašto se studenti ponašaju na određeni način. Uz svako pitanje ponuđeno je 8 odgovora/tvrdnji, te stoga čitav upitnik sadrži 32 čestice. Svaka tvrdnja se procjenjuje na skali Likertovog tipa od 1 do 7 (gdje je 1 – uopće se ne slažem, 4 – niti se slažem, niti se ne slažem, i 7 – potpuno se slažem). Vanjska i usvojena regulacija predstavljena je s 9 čestica, dok je poistovjećena regulacija i intrinzična motivacija predstavljena s 7 čestica. Svaka subskala se može koristiti zasebno. Autori upitnika ostavili su mogućnost korištenja subskala i u kombinaciji, tvoreći indeks relativne autonomije; RAI = 2x intrinzična motivacija + poistovjećena regulacija – usvojena regulacija – 2x vanjska regulacija. Iz formule je vidljivo da su subskale koje predstavljaju autonomni oblik regulacije ponderirane pozitivno, a subskale koje predstavljaju kontrolirani oblik regulacije ponderirane negativno. RAI indeks ukazuje na stupanj u kojem je ponašanje autonomno regulirano odnosno samoodređeno. Potvrđeno je da su tipovi regulacije za koje se pretpostavlja da leže bliže na kontinuumu samoodređenja u većoj međusobnoj korelaciji nego oni udaljeniji, što pokazuje da RAI indeks adekvatno mjeri dimenziju samoodređenja. Upravo ti rezultati potvrđuju opravdanost kombiniranja prosječnih rezultata na pojedinim subskalama u indeks relativne autonomije i to tako da svakom stilu regulacije pridajemo određenu težinu u skladu s njegovim smještajem na kontinuumu motivacije. Rezultate je moguće formirati i posebno za kontroliranu motivaciju (vanjska regulacija + usvojena regulacija) i posebno za autonomnu motivaciju (poistovjećena regulacija + intrinzična motivacija). Pouzdanost cijelog upitnika (Cronbachov alpha) u našem istraživanju iznosi $\alpha = 0,92$. Pouzdanost pojedinih subskala ovog upitnika je sljedeća: vanjska regulacija $\alpha = 0,80$, usvojena regulacija $\alpha = 0,82$, poistovjećena regulacija $\alpha = 0,80$ i intrinzična motivacija $\alpha = 0,84$. Sviben (2006) je u svom istraživanju dobila da se pouzdanost subskala (Cronbachov alpha) kreće od $\alpha = 0,81$ do 0,84. Prijevod i prilagodbu na hrvatski napravila je Sviben (2006) u sklopu izrade diplomske radnje.

Upitnik za samoprocjenu zdravstvenog statusa (SF-36 Health; Survey, Ware i Sherbourne, 1992)

Ovaj, često korišteni upitnik reprezentira teorijski utemeljenu i empirijski provjerenu operacionalizaciju dva generalna koncepta zdravlja - fizičko zdravlje i psihičko zdravlje te dvije njegove općenite manifestacije - funkcioniranje i dobrobit.

Obuhvaća 36 čestica grupiranih u osam različitih ljestvica zdravlja: fizičko funkcioniranje, tjelesni bolovi, ograničenja u ostvarenju životnih uloga zbog problema fizičkog zdravlja, ograničenja uslijed emocionalnih problema, mentalno zdravlje, vitalnost, socijalno funkcioniranje te opća procjena zdravstvenog stanja. Upitnik je konstruiran s ciljem mogućnosti precizne komparacije različitih grupa u osam navedenih konceptualnih područja. Izrada i usporedba profila dobivenih rezultata olakšava razumijevanje populacijskih razlika u fizičkom i psihičkom zdravstvenom stanju.

Interes ovog istraživanja jest psihičko zdravlje i opće zdravlje sudionika. Skala općeg psihičkog zdravlja dobiva se sumiranjem sljedeće tri ljestvice upitnika zdravlja *SF-36:* socijalno funkcioniranje (SF), ograničenja u ostvarenju životnih uloga zbog emocionalnih problema (UE) i psihičko zdravlje (PZ). Broj bodova zabilježen na svakoj ljestvici transformiran je na jedinstvenu skalu čiji teorijski minimum iznosi 0 (osoba izvještava o potpunoj bolesti), a maksimum 100 bodova (osoba izvještava o potpunom zdravlju). Koncept općeg psihičkog zdravlja izražen je kao prosjek uratka na trima navedenim ljestvicama, a njegova unutarnja pouzdanost (Cronbachov alpha) iznosi 0,88. Skala općeg zdravlja sastoji se od 5 čestica, a njihovim sumiranjem dobiva se rezultat za navedenu skalu. Dobiveni broj bodova, kao i u prethodnom slučaju, transformiran je na jedinstvenu skalu čiji teorijski minimum iznosi 0, a maksimum 100 bodova. Pouzdanost skale općeg zdravlja (Cronbach alpha) iznosi 0,71. Pouzdanost cijelog upitnika (Cronbachov alpha) u našem istraživanju iznosi $\alpha = 0,77$, dok je pouzdanost subskala psihičko zdravlje $\alpha = 0,75$ i opće zdravlje $\alpha = 0,72$. Prijevod i norme za hrvatsku populaciju napravile su Maslić Seršić i Vuletić (2006) te je njihova verzija korištena i u ovom rad.

Postupak

Svi su sudionici bili informirani o općim ciljevima i svrsi istraživanja te im je jasno omogućena dragovoljnost sudjelovanja u istraživanju. Također im je zajamčeno da će se podatci koristiti isključivo u znanstvene svrhe.

Podatci su prikupljeni za vrijeme trajanja nastave ljetnog semestra, grupno, u trajanju od 45 minuta. Nakon što su im uputa i upitnici bili podijeljeni, psihologinja je pročitala naglas uputu te ih uputila da je još jednom sami pročitaju prije popunjavanja upitnika. Po završetku popunjavanja upitnika sudionici su mogli postavljati pitanja te su dobili kontakt e-mail ukoliko naknadno budu imali dodatnih pitanja.

REZULTATI I RASPRAVA

Tablica 2.

Pri obradi rezultata prvo smo izračunali deskriptivne statistike za varijable uključene u istraživanje (tablica 2). Zatim smo izračunali interkorelacije ispitivanih varijabli koje se nalaze u tablici 3. Preduvjeti za provođenje korelacijske analize su zadovoljeni za motivacijske varijable (RAI, vanjska, usvojena i poistovjećena regulacija i intrinzična motivacija; Kolmogorov-Smirnov test nije bio statistički značajan), dok za ostale varijable nije zadovoljen uvjet normalnosti distribucije (Kolmogorov-Smirnov test bio je statistički značajan). Međutim, kako se radi o velikom uzorku (N ≥ 200 ; prema Fieldu, 2009) moguće je da i manja odstupanja od normalnosti ukazuju na to da je narušen uvjet normalnosti distribucije, odnosno da rezultati nisu normalno distribuirani. Zbog toga smo provjerili koeficijent asimetrije (skewness) i koeficijent zaobljenosti (kurtosis), koji su ukazali da nije značajno narušena normalnost distribucije niti za jednu varijablu, odnosno rezultati za koeficijent asimetrije su se kretali od -/+ 0,395 do -/+ 0,958, a za koeficijent zaobljenosti od -/+ 0,384 do -/+ 0,984. Prema Fieldu (2009) i Sirkinu (2006), smatra se da je koeficijent asimetrije i zaobljenosti vrlo dobar ukoliko se njegova vrijednost kreće između +1 i -1, a za primjenu većine univarijatne parametrijske statistike prihvaća se i vrijednost koeficijenata između +2 i -2, te smo stoga odlučili primijeniti Pearsonov koeficijent korelacije u daljnjim analizama.

Analizom korelacija u tablici 3 potvrdili smo povezanost akademskog uspjeha i različitih tipova motivacije što je bilo i u skladu s našim očekivanjima. Time smo potvrdili prvu hipotezu. Za mjere akademskog uspjeha upotrijebili smo dva pokazatelja, opći uspjeh sudionika na prethodnoj godini studija i ukupan broj nepoloženih ispita (koji smo dobili sumiranjem broja nepoloženih ispita iz prethodne godine studija i broja nepoloženih ispita iz prethodnog semestra). Za mjere motivacije koristili smo četiri tipa motivacije koji se protežu na kontinuumu samoodređenja (vanjska, usvojena i poistovjećena regulacija te intrinzična motivacija) te

indeks relativne autonomije (RAI) koji je preciznija mjera motivacije (za razliku od subskala motivacije) jer se odnosi na stupanj autonomne samoodređenosti (koji se proteže cijelim kontinuumom samoodređenja). Dobivena je statistički značajna pozitivna povezanost između autonomnih tipova regulacije motivacije (poistovjećena regulacije i intrinzična motivacija), RAI i općeg uspjeha, što govori u prilog tome da studenti s većim stupnjem autonomne motivacije postižu bolji opći uspjeh. Nije dobivena statistički značajna povezanost između kontroliranih tipova motivacije (vanjska i usvojena regulacija) i općeg uspjeha. Što se tiče drugog pokazatelja akademskog uspjeha, dobivena je statistički značajna negativna povezanost između autonomnih tipova motivacije, RAI i ukupnog broja nepoloženih ispita te nije dobivena statistički značajna povezanost između kontroliranih tipova motivacije i ukupnog broja nepoloženih ispita. Ovi rezultati govore u prilog tome da studenti s većim stupnjem autonomne motivacije imaju manji broj ispita koje nisu položili. Dobiveni rezultati su u skladu s prijašnjim istraživanjima u sklopu TS koja su pokazala da je autonomna motivacija, nasuprot kontrolirane, povezana s pozitivnim ishodima učenja (Reeve, Deci i Ryan, 2004), boljim strategijama učenja, većom upornošću i boljom izvedbom zadataka (Connell i Wellborn, 1990; Fortier i sur., 1995; Grolnick i sur., 1991; Guay i Vallerand, 1997; Deci i Ryan, 1985, 2000). Studenti koji imaju pretežno kontroliranu motivaciju, osim lošijeg uspjeha, uče i manje efikasno osobito ako se od njih zahtijeva određena stupanj kreativnosti (Amabile, 1996; Grolnick i Ryan, 1987; Utman, 1997). Prednost autonomne motivacije, nad kontroliranom, osim u uspjehu, vidljiva je i u većoj upornosti i efikasnosti (Vansteenkiste i sur., 2004) što opet zauzvrat rezultira i boljim općim uspjehom. Također i istraživanja provedena na našoj populaciji (Sviben, 2006; Velki, 2008) pokazala su slične rezultate. Kako su dobivene korelacije relativno male (a za kontrolirane tipove motivacije nije dobivena statistički značajna povezanost niti s jednom mjerom akademskog uspjeha), rezultati ovog istraživanja mogu upućivati na to da možda ocjene (na temelju kojih je izračunat opći uspjeh) nisu prepoznate kao važne od strane studenata pa stoga nisu pravi indikator njihovog znanja. Jedan od razloga mogao bi biti to što se ocjene ne primjenjuju konzistentno, odnosno kriteriji ocjenjivanja nisu usuglašeni. Svaki profesor ima svoje kriterije pri ocjenjivanju studenata, a kako se radi o dva fakulteta na kojima je rađeno istraživanje, moguće je da je razlika u kriterijima ocjenjivanja još više izražena između studenata različitih fakulteta. Također i subjektivnost profesora može utjecati na ocjenjivanje studenata. Osim toga studenti mogu primati različite poruke od roditelja i prijatelja koje se odnose na važnost ocjene što će utjecati i na njihov odnos

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prema kolegiju. Nadalje, studenti mogu odlučiti i da odustanu od daljnjeg studiranja kako bi izbjegli postizanje lošeg akademskog uspjeha.

Drugi pokazatelj akademskog uspjeha (ukupan broj nepoloženih ispita) imao je nešto više korelacije s autonomnim tipovima motivacije i RAI te također nije dobivena povezanost s kontroliranim tipovima motivacije. Dosada nisu rađena istraživanja koja su za mjeru akademskog uspjeha uzela i broj nepoloženih ispita. Bitno je naglasiti da nam ova mjera uspjeha može poslužiti kao dobra provjera stvarnog akademskog uspjeha. Kako studenti primjenjuju različite taktike da bi uspješno završili studij, a jedna od njih je i polaganje lakših ispita, iz kojih dobivaju bolje ocjene i skupljaju određen broj bodova za upis u višu godinu studija, često se dogodi da imamo više studenata s jednakim općim uspjehom, ali je velika razlika u broju nepoloženih ispita. Stoga bi trebalo uzeti u obzir da su ipak akademski uspješniji oni studenti, koji uz vrlo dobar ili izvrstan opći uspjeh imaju i manji broj nepoloženih ispita. Iz dobivenih rezultata ovog istraživanja upravo se jasno vidi da su studenti s najmanjim brojem nepoloženih ispita studenti koji su ujedno i najviše autonomno motivirani. Ipak i ove dobivene korelacije su relativno niske. Razlog tome je možda u činjenici da samo određeni broj nepoloženih ispita studenti mogu prenijeti u sljedeću godinu ili čak semestar. Stoga oni studenti, koji imaju veći broj nepoloženih ispita, nisu uspjeli upisati višu godinu te ih kao takve nismo ni zahvatili ovim istraživanjem. Isto tako ti studenti češće odustaju od studiranja ili mijenjaju fakultete što nas vodi k tome da je zapravo smanjen broj studenata s kontroliranom motivacijom (jer upravo oni pripadaju u ovu skupinu), što je moglo utjecati na nedobivanje povezanosti između kontroliranih tipova motivacije i ukupnog broja nepoloženih ispita. Vallerand i Bissonnette (1992) su na kanadskim studentima proveli istraživanje koje je pratilo akademski uspjeh studenata tijekom jedne godine. Rezultati su upravo pokazali da su studenti koji su odustali tijekom godine imali statistički značajno niže rezultate na indeksu relativne autonomije (tj. prevladavala je kontrolirana motivacija), za razliku od studenta koji su nastavili školovanje (tj. kod kojih je prevladavala autonomna motivacija).

Koristeći RAI mogli smo vidjeti i koliko je studenata autonomno motivirano. U našem istraživanju većina ih je autonomno motivirana (59,71%), dok su studenti s kontroliranom motivacijom (40,29%), osim što su u manjem broju, imaju i manji raspon rezultata, što je moglo utjecati na nedobivanje povezanosti između kontroliranih tipova motivacije i oba pokazatelja akademskog uspjeha. Naši rezultati upućuju da je motivacija u studenata relativno samoodređena te da prevladava autonomni tip motivacije regulacije, što je u skladu s prijašnjim istraživanjima (Guay i Vallerand, 1997; Levesque i sur., 2004;. Reeve, i sur., 2004; Sviben, 2006;

Velki, 2008; Yi-Guang i McKeachie, 1999). Također dobiveni rezultati podržavaju tezu TS kako su intrinzična motivacija i integrirana ekstrinzična motivacija povezane s akademskih uspjehom (Ryan i Deci, 2000).

Druga hipoteza odnosila se na povezanost psihičkog zdravlja i različitih tipova motivacije (tablica 3). Dobivena je statistički značajna pozitivna povezanost između RAI i psihičkog zdravlja te statistički značajna negativna povezanost između kontrolirane motivacije (vanjska i usvojena regulacija) i psihičkog zdravlja. Rezultati govore u prilog tome da studenti s većim stupnjem autonomne motivacije izvještavaju i o boljem psihičkom zdravlju, dok studenti s kontroliranom motivacijom izvještavaju o slabijem psihičkom zdravlju. U skladu s prijašnjim istraživanjima (Levesque i sur., 2004; Maltby i Day, 2001; Ratelle i sur., 2004; Sheldon i Kasser, 1995; Velki, 2009) dobiveni rezultati su omogućili dodatnu empirijsku podršku za pozitivnu povezanost stupnja autonomije i psihičkog zdravlja. Kako je opće zdravlje nešto što može indirektno utjecati na akademskih uspjeh, pa tako i motivaciju (npr. nedostupnost određenih sadržaja zbog teške bolesti ili invalidnosti, nemogućnost izvođenja vježbi na fakultetu i sl.), provjerili smo i povezanost općeg zdravlja i različitih tipova motivacije. Dobivena je statistički značajna pozitivna povezanost RAI i općeg zdravlja te poistovjećene regulacije motivacije i općeg zdravlja. Negativna statistički značajna povezanosti dobivena je između vanjske regulacije i općeg zdravlja. Dobivene korelacije su niže nego one između psihičkog zdravlja i RAI, što je u skladu s očekivanjima. Ryan i Connell (1989) su pronašli da je usvojena regulacija (kontrolirana motivacija) pozitivno povezana s anksioznošću u školi i negativnim načinima suočavanja s neuspjehom, dok je poistovjećena regulacija (autonomna motivacija) bila pozitivno povezana s uživanjem u školi i pozitivnim načinima suočavanja s neuspjehom. Rezultati ovog istraživanja upućuju na to da, iako studenti s relativno kontroliranom motivacijom mogu izgledati motivirano poput studenata s autonomnom motivacijom, razlike se pojavljuju, osim u akademskom uspjehu, još više u psihičkom zdravlju. Prednost autonomne motivacije nad kontroliranom pronađena je i u drugim istraživanjima koja su pokazala kako autonomna motivacija utječe na povećanje psihičkog zdravlja (Black i Deci, 2000; Levesque i sur., 2004). Brojna istraživanja na studentima pokazala su da je ekstrinzična motivacija povezana i s lošijim psihičkim zdravljem i više internalnih simptoma (Kasser i Ahuvia, 2002; Ryan, Deci i Grolnick, 1995; Srivastava, Locke i Bartol, 2001; Vansteenkiste, Duriez, Simons i Soenens, 2006). Osim toga istraživanja su pokazala da osim što autonomna motivacija pridonosi boljem psihičkom zdravlju, da psihičko zdravlje doprinosi i boljem općem zdravlju (Miquelon i Vallerand, 2008). Općenito osobe koje su autonomno motivirane imaju način funkcioniranja koji je dobro integriran s

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njihovim aspektima vlastitog viđenja sebe što pozitivno djeluje prvenstveno na psihičko zdravlje, a preko psihičkog zdravlja i na opće zdravlje. Studenti koji su pod stalnim vanjskim pritiskom (npr. materijalne nagrade, kazne, rokovi i sl.) ili unutarnjim pritiskom (npr. izazivanje osjećaja krivnje, sramoćenje pred drugima, uskraćivanje ljubavi i sl.) imat će visok stupanj kontrolirane motivacije, što će posljedično uzrokovati lošije psihičko zdravlje (npr. anksioznost, depresija i sl.), a time će djelovati i na lošije opće zdravlje. Iako su dobiveni rezultati očekivani, postoji nekoliko mogućih razloga zbog kojih su dobivene korelacije relativno niske. Prvo, sudionici našeg istraživanja su bili studenti (homogeni uzorak po dobi, stupnju obrazovanju i dr.) te se dobiveni rezultati ne mogu generalizirati na druge dobne i kulturalne grupe. Osim toga, većina studenta izvještava o dobrom psihičkom i općem zdravlju što moglo i očekivati jer se radi o mladim ljudima, a osim toga i pri upisu na fakultet morali su proći liječnički pregled. Treće, rezultati dobiveni i za psihičko i za opće zdravlje dobiveni su na temelju samoprocjene sudionika, što je vrlo subjektivna mjera. U budućim istraživanjima bilo bi dobro utvrditi i neke objektivne mjere zdravlja.

Tablica 3.

Općenito možemo reći da je ovo istraživanje pokazalo i potvrdilo rezultate prijašnjih istraživanja koja govore u prilog tome da je veći stupanj relativne autonomije povezan s boljim akademskim uspjehom i boljim psihičkim i općim zdravljem. Postoji i nekoliko bitnih ograničenja u opisanom istraživanju, što je bitno napomenuti. Prvo ograničenje odnosi se na uzorak sudionika korišten u ovom istraživanju. Raspon godina sudionika kretao se između 19 i 25, što je relativno mali raspon, ali smatramo da dobro reprezentira studentsku populaciju. Osim toga sudionici su bili studenti samo 2. i 3. godine studija. Iako bi bilo poželjno da smo imali uključene sve generacije studenata u naše istraživanje to je bilo praktički neizvedivo. Prvi problem koji se javio odnosio se na opći uspjeh s prethodne godine studija, tako da studenti prvih godina studija ne bi mogli dati traženi podatak. Za studente prvih godina i za varijablu broj nepoloženih ispita također bi bilo nemoguće skupiti valjane podatke. Studente 4. godine studija (odnosno 1. godine diplomskog studija prema bolonjskom procesu) također nismo uzeli u istraživanje zbog nekoliko razloga. Kako prema bolonjskom procesu studenti 4. godine zapravo moraju ponovo upisati studij (jer su prema novom programu završili preddiplomski studij te sada upisuju dvije godine diplomskog studija) što podrazumijeva da su položili sve ispite s prethodne tri godine, obranili završni rad i položili prijemni ispit. Tako da se i za ove studente javlja isti problem kao i sa studentima prve godine. Osim toga puno studenata upisuje i apsolventsku godinu, nakon odslušane treće godine, te

je vrlo teško stupiti s njima u kontakt, a oni bi nam bili ključni jer pripadaju istoj generaciji kao i studenti koji su upisali 4. godinu, odnosno 1. godinu diplomskog studija. Što se tiče studenata 5. godine (odnosno 2. godine diplomskog), kako je studiranje prema bolonjskom procesu tek nedavno uvedeno na hrvatska sveučilišta, još ne postoji generacija studenata koja je došla do 5. godine studija (najstarija generacija studenata prema bolonjskom procesu su zapravo studenti 4. godine). Drugo ograničenje odnosi se na mjeru akademskog uspjeha. Iako smo imali dva pokazatelja akademskog uspjeha, problem se javio jer nisu bili primjenjivi za određene generacije (1. godina preddiplomskog studija i 1. godina (odnosno 4. godina) diplomskog studija). Stoga bi se buduća istraživanja trebala usmjeriti na sve generacije studenata koji pohađaju određeni fakultet te na dodatne mjere akademskog uspjeha koje će biti primjenjive na sve generacije (npr. ocjene iz kolokvija, broj izlazaka na pojedini ispit, prisustvovanje nastavi i sl.). Treće ograničenje odnosi se na mjere psihičkog i općeg zdravlja. Iako smo za navedene mjere koristili provjereni i vrlo često korišteni instrument, problem je u tome što se svi odgovori studenata baziraju na samoprocjeni. Poznato je da određeni psihički poremećaji (npr. narcisoidna ličnost i neki drugi poremećaji ličnosti) ne moraju predstavljati problem osobi, nego su velik problem za njenu okolinu pa stoga osoba pri samoprocjeni neće ni izvijestiti da ima problema. Osim toga, ukoliko osoba od rođenja ili djetinjstva ima određenih fizičkih zdravstvenih poteškoća kojima je dobro prilagođena (npr. dijabetes, invalidnost, hemipareza i sl.) također njezino zdravstveno stanje ne će biti realno prikazano putem samoprocjena na ljestvici općeg zdravlja. Buduća bi istraživanja trebala koristiti i dodatne mjere zdravstvenog stanja osobe (npr. psihijatrijske procjene, intervju, procjene od strane obitelji i/ili vršnjaka, liječnički pregled i sl.). Stoga buduća istraživanja koja će provjeriti generalizaciju dobivenih rezultata trebaju uzeti u obzir navedena ograničenja.

ZAKLJUČAK

Navedeno istraživanje potvrdilo je rezultate prijašnjih studija, i to na hrvatskoj populaciji. Kako je i očekivano, dobivena je pozitivna povezanost između stupnja autonomije motivacije i akademskog uspjeha te stupnja autonomije motivacije i psihičkog zdravlja. Najveći problem koji je ostao neriješen odnosi se na generalizaciju dobivenih rezultata na sveukupnu studentsku populaciju pa i šire. Buduća istraživanja su potrebna kako bi se testirale postavke teorije samoodređenja i njihova generabilnost, i to ne samo na studentskoj nego i široj populaciji.